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U.S. Coast Guard Marine Safety Center News

RECENT NEWS

MSC Moved to New Location

The Marine Safety Center (MSC) moved in mid-December 2005 to a new location. Our new address is:

Commanding Officer
Coast Guard Marine Safety Center
1900 Half Street, SW, Suite 1000, Room 525
Washington, DC 20024
Phone Number: (202) 475-3401
Fax Number: (202) 475-3920

These new accommodations are located in close proximity to Coast Guard Headquarters and will allow for closer interaction with our Headquarters counterparts on policy issues. While courier packages may be sent directly to the above address, regular postal service mail for the MSC should be sent through the Coast Guard Headquarters mailroom at:

Commanding Officer
Coast Guard Marine Safety Center
2100 Second Street, SW
Washington, DC 20593

Our e-mail addresses have also changed. E-mail addresses that ended in @msc.uscg.mil are now changed to @comdt.uscg.mil.

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Recent CVE Legislation

In August 2004, Congress passed H.R. 2443, the Coast Guard Authorization Act. Section 411 of that act amends 46 U.S. Code Section 3505 and, thereby, essentially extends the Control Verification Examination (CVE) Program to foreign cruise ships that visit a U.S. port with U.S. citizens onboard as passengers. Under this amendment, a CVE is required regardless of where passengers originally embarked the vessel. To complete the CVE process, approved flag state plans must be reviewed by MSC. These plans are required six months in advance of anticipated completion of the process.

NVIC 1-93 Revision

Navigation and Vessel Inspections Circular (NVIC) 1-93, *"Control Verification Examinations (CVE's) of Foreign Passenger Vessels,"* has served as the guideline for the foreign passenger ship inspection program for many years. The Commandant's

Office of Vessel Activity (G-PCV) has completed a final draft of NVIC 1-93, with significant input from MSC staff, Coast Guard field offices, and industry partners. Because the CVE process has evolved considerably over the years, this revision is focused on capturing the current processes. An additional goal is to make the process more robust to facilitate incorporation of evolving industry standards and design features. We are currently incorporating recent industry feedback. When published, copies of this NVIC will be available online at http://www.uscg.mil/hq/g-m/nvic/.

SOLAS Regulation 17

SOLAS Chapter II-2/Regulation 17, *Alternative Design and Arrangements* affords greater opportunity to pursue novel, innovative designs traditionally prohibited by prescriptive regulations. Regulation 17 and IMO MSC/Circ. 1002 establish a formal process of performance-engineering analysis for the evaluation and approval of designs that deviate from the prescriptive fire safety standards. Such performance-based design is very time-consuming, requires an iterative engineering approach involving the approval bodies, and demands effective communication, particularly between the vessel designer, flag administration, and Coast Guard. It is imperative that the MSC be engaged early in the concept phase, well in advance of construction or final approval of the alternative design. MSC is in the process of drafting comprehensive guidelines intended to ensure the process for submitting a Regulation 17 design is consistent and adequately documented. Please contact MSC if you have any questions.

MSC SOLAS PLAN REVIEW GUIDANCE

The MSC has compiled lessons learned and solutions to common plan review issues into a comprehensive set of plan review guidance for vessels governed by SOLAS. The purpose is two-fold. First, it identifies the Coast Guard's expectations on various design aspects that had historically been identified late in construction (i.e. during the examination). In this sense, it is our specific intention to eliminate "surprises" to builders and owners late in the control verification process. Second, the simple practice of documenting this guidance ensures consistency by MSC staff. It does not alter or replace laws, regulations, or other official Coast Guard policy, but is specifically directed at promoting early and effective communication by all involved parties. Up to date plan review guidance is available online at:
http://www.uscg.mil/hq/msc/PRGuidance.SOLAS.htm

The following are provided to highlight recent lessons learned during plan review:

Quality Assurance: Sprinkler and Detector Installation

During plan review and exams, Coast Guard inspectors verify that appropriate quality assurance systems are in place. One key area is confirming the proper installation and arrangement of sprinklers and smoke detectors. Sprinkler (hi-fog) heads and smoke detectors must be installed in accordance with their type approval certificates. More specifically, in spaces such as storage rooms and crew stair towers, sprinkler heads and smoke detectors should not be attached to pipes or support braces suspended from the ceiling. This significantly decreases the effectiveness of the detection and suppression systems. The sprinkler heads are designed such that when heat collects along the ceiling, the sprinkler is quickly activated in the early stages of the fire. As the sprinkler head is placed further from the ceiling, a greater amount of heat must accumulate prior to activation. This is similar to the activation of the smoke detectors that require an accumulation of smoke at the ceiling level prior to activation. Therefore, it is critical that sprinkler heads and detectors be installed in the proper location to ensure effective operation.

The ceiling height of the space should not exceed the limits approved for the installed sprinkler head. Validation requires careful attention to detail, as sprinkler heads for various ceiling heights are often quite similar in appearance. Future exams will include discussion and verification that the Recognized Organization (RO) has appropriate quality control procedures in place to ensure all sprinkler heads and smoke detectors are installed as per manufacturer specifications and all approval certificates.

Emergency Escape & Security Plans

During plan review, MSC will review the emergency escape plans which are usually prepared by the shipyard. However, during recent exams, we have noted that security measures developed prior to vessel delivery can inadvertently create problems not previously noted during the review of emergency escape plans. Specifically, we have noted that for security reasons, certain doors are to be locked at varying times of day or night. Specification of which doors are to be locked and which are not is made by the owner, usually very late in the vessel's design. However, when vessel egress arrangements are being developed, the primary involved parties are the shipyard and RO. Consequently, these two plans have the potential to contradict one another if not considered jointly early in the design and construction the vessel. Dead end corridors can be created by the locking of doors for security purposes. All parties involved - USCG, shipyard, class society, and owners must take steps during plan review to ensure that security measures do not negatively impact escape arrangements. Submitters should expect the MSC and Coast Guard field units to query about door locking plans during review of the escape plans, both in plan review and during exams.

Open Watertight Doors During Navigation

SOLAS regulation II-1/15.9.3 permits certain watertight doors to remain open during navigation if considered absolutely necessary; that is, being open is determined essential to the safe and effective operation of the ship's machinery or to permit passengers normally unrestricted access throughout the passenger area. This regulation further states "Such determination shall be made by the Administration only after careful consideration of the impact on ship operations and survivability." If permitted to remain open, WT doors shall be ready at all times to be immediately closed. In such cases, the MSC will request, either during plan review or exams, to see the Administration's analysis or report documenting both the need for the watertight door to remain open and impact of the open door on the ship's operations and survivability.

Small Toilets within Other Spaces

In recent years we have encountered small toilets within a variety of spaces without structural fire protection boundaries or dedicated escape ways. Traditionally, such arrangements have only been accepted on a limited basis through the addition of local audible alarms or windows. Noting that SOLAS II-2/ Reg. 9.2.2.3.2.2(9) states: "Private sanitary facilities shall be considered a portion of the space in which they are located," we must consider the appropriate arrangement for heads in laundries, galleys, pilothouses, and machinery spaces, where we have often seen them. Consideration must be given to the storage of combustibles inside these small toilets.

SOLAS II-2/Regulation 9, Table 9.1 rates communal sanitary facilities as category 9 spaces. Footnotes c and d establish that if a category 9 space is located within the boundaries of assembly stations or stairways they can be B-0. Category 9 spaces next to staterooms can be C class.

Other considerations include regulation II-2/7.5.2, which says that you do not need to install fire detection in low risk spaces such as private and public toilets, and Regulation II-2/10.6.1.1, which exempts sprinklers in these spaces. SOLAS generally recognizes small toilets as low risk spaces.

In the end, we believe one toilet and one sink are acceptable if totally enclosed in the affected space. If there is more than one toilet or there is any storage area for combustible materials, the toilet should be a category 9 space and should follow the appropriate tables for SFP.

Loose Furniture in Escape Corridors

Careful attention must be taken during any attempt to change escape corridors into accommodation spaces of some fire risk. Category 3 corridors and lobbies serve a distinct purpose in providing clear escape paths to stair towers. Any attempt to contravene this purpose results in a distinct reduction in the safe means of escape. We have accepted the dual use of escape corridors in the reception areas of the hospital and spa areas with certain conditions. The furniture and furnishings in these areas are limited and comparable to those allowed in a stair. Seating must be fixed, non-combustible, and not restrict the use of the reception area as a means of escape. Additionally, we do not accept placement of closed cabinets or other storage of combustibles in a category 3 corridor. Please ensure these matters are considered when designing corridors and lobby areas.

Contact Information

The Marine Safety Center is available to answer questions at any time during the design and construction process. Concept review of novel arrangements and designs is encouraged. Please contact the Chief of the Major Vessel Branch (LCDR Scott Kelly) at (202) 475-3401 or fax your inquiry to (202) 475-3920. You may also email the MSC at ec@comdt.uscg.mil. We look forward to working with you. Please check our website for plan review guidance at http://www.uscg.mil/hq/msc/.